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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,358	08/31/2001	Akira Kouchiyama	SON-2220	8672

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EXAMINER

HUBER, PAUL W

ART UNIT PAPER NUMBER

2653

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/943,358

Applicant(s)

KOUCHIYAMA ET AL.

Examiner

Paul Huber

Art Unit

2653

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 1-5, 10-12 and 18 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-9 is/are allowed.
- 6) ☒ Claim(s) 13, 16, 17 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 14 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01082002.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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Applicant's election of Group II (claims 6-9, 13-17 and 19-21) in the reply filed on October 20, 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 13, 16, 17 and 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Mifune et al. (USP-6,324,149).

Regarding claims 13 & 19, Mifune et al. discloses a method for preparing an optical device, wherein, when forming an optical lens by etching on one surface of a substrate consisted of an optical material, position matching markers are formed simultaneously around the optical lens. See figures 24A, 24B & 25, and col. 13, lines 25-65. The optical lens may be formed by dry etching. See col. 10, lines 33-40. A gas mixture of at least one selected from the group of an oxygen gas, an Ar gas and a He gas and a fluorinated carbon gas is used as an etching gas. See col. 10, lines 41-45.

Regarding claims 16 & 20, Mifune et al. discloses forming a mask material (resin) in correspondence with a shape of the optical lens on the substrate consisted of the optical material, and subsequently deforming the mask material by heat treatment so that a surface area of the mask material is reduced. See figures 8-10, and col. 10, lines 17-31. The optical lens having a shape conforming to a shape of the mask is transcribed by dry etching on the substrate. See col. 10, lines 33-40. "The substrate glass is etched (anisotropic etching) in a vertical direction by using the resin of the lens shape 701 as a mask. A dry etching process conventionally used in a semiconductor manufacturing process may be employed for the etching."

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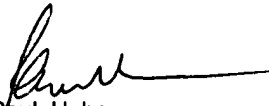
Regarding claims 17 & 21, the temperature of heat treatment is inherently higher than a glass transition temperature of the mask material and lower than a carbonizing temperature of the mask material.

Claims 6-9 are allowed.

Claims 14 & 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: the prior art of record considered as a whole fails to teach or suggest a method for preparing an optical device for converging a light beam illuminated on an optical medium, the method comprising the steps of: forming light converging means on one surface of a substrate consisted of an optical material by dry etching; **forming a light barrier film on an opposite side surface of the substrate; and patterning the light barrier film by a photolithographic technique to form a light transmitting aperture for transmitting the light beam converged by the light converging means therethrough.** (bold language emphasized).

Any inquiry concerning this communication should be directed to Paul Huber at telephone number 703-308-1549.



Paul Huber  
Primary Examiner  
Art Unit 2653

pwh  
February 22, 2005